USDA United States Department of Agriculture

Natural Resources Conservation Service

Colorado Basin Outlook Report March 1, 2001

Basin Outlook Reports
and
Federal - State - Private
Cooperative Snow Surveys

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How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

COLORADO
WATER SUPPLY OUTLOOK REPORT
MARCH 1, 2001

Summary

Only slight improvements were measured in the state's snowpack during February, leaving most of the state below average. Now, with only one month remaining in the normal snowpack accumulation season, the next few weeks will be critical for next summer's water availability. The probability of returning to a near average snowpack remains slim, so most water users will need to plan for possible shortages. Reservoir storage should help to alleviate shortages in some locations, however, the state's reservoirs are containing lower volumes than many water users may be accustomed to. Long-term weather forecasts don't offer much hope for improvement, with near normal spring precipitation expected across most of the state.

Snowpack

Colorado's statewide snowpack improved only slightly this month and is now 86% of average. While the current readings are 108% of last year's, they are significantly above last year only across southern Colorado. During February, the greatest snowpack improvements were measured in the Rio Grande, Arkansas, and Gunnison basins, which increased from 6 percent to 10 percent of average from last month. Most of the state is reporting a snowpack of 79% to 85% of average, and includes the Gunnison, Colorado, Arkansas, North Platte, Yampa and White basins. Higher percentages were measured across southern Colorado, where the Rio Grande is 101% of average, and the combined San Juan, Animas, Dolores, and San Miguel basins are 96% of average. Some of the smaller headwater basins across southern Colorado can boast of readings that are two to three times that of last year's meager snowpack. The Rio Grande's snowpack of 101% of average is the first time a major basin has exceeded the average mark in Colorado during the 2001 water year. Meanwhile, the lowest snowpack measurements were made in the South Platte Basin. This basin is reporting a snowpack of only 69% of average, with most Front Range basins reporting only 52% to 72% of average snowpack readings. At the March 1 date, approximately 80% of the winter's snowpack has accumulated in a normal year. Reaching an average snowpack by April 1 would require a March snowfall of 138% of average. While not impossible, the odds remain slim. This month's snowpack readings add another year to the string of consecutive years of below average snowpack. Every March since 1997 has been below average, ranging from 80% of average last year, to 87% of average in 1998.

Precipitation

Precipitation measured at SNOTEL sites across Colorado was slightly above average across the state during February. Only the Colorado Basin reported a below average monthly total, at 95% of average. However, the combined southwestern basins and the Rio Grande Basin reported well above totals for the month, at 133% and 143% of average, respectively. The heavy February precipitation across southwestern Colorado helps to maintain the above average water year totals in these basins. The highest water year percentages are reported in the San Juan, Animas, Dolores, and San Miguel basins, at 110% of average. For the remainder of the state, below average water year totals are the rule, and range from only 75% of average in the South Platte Basin, to 87% of average in the Arkansas Basin. Statewide, precipitation during February was 113% of average, which increased the water year totals to 88% of average.

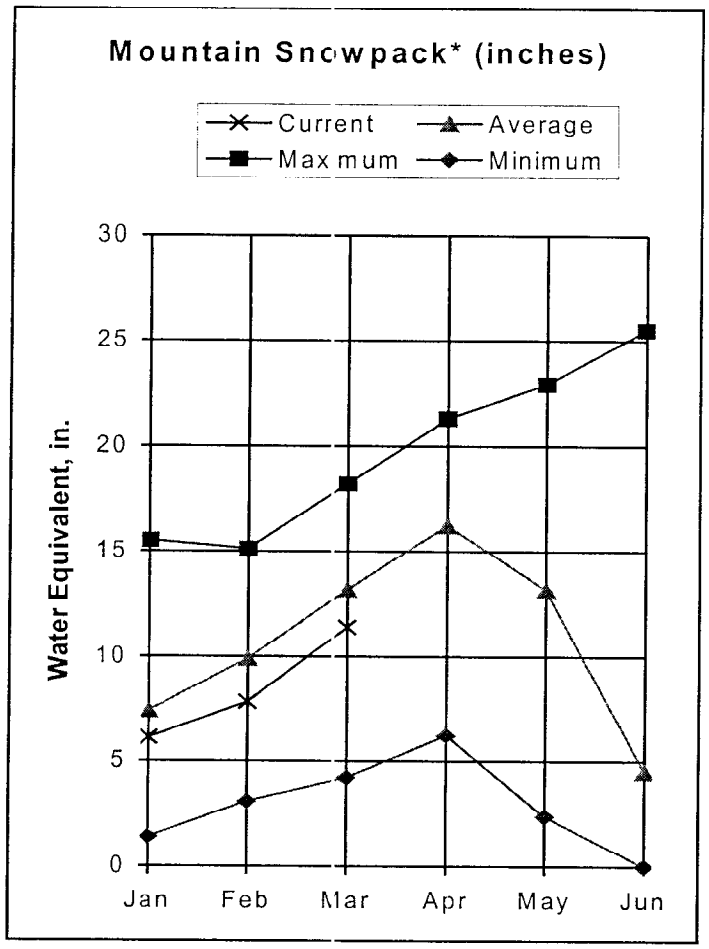
Reservoir Storage

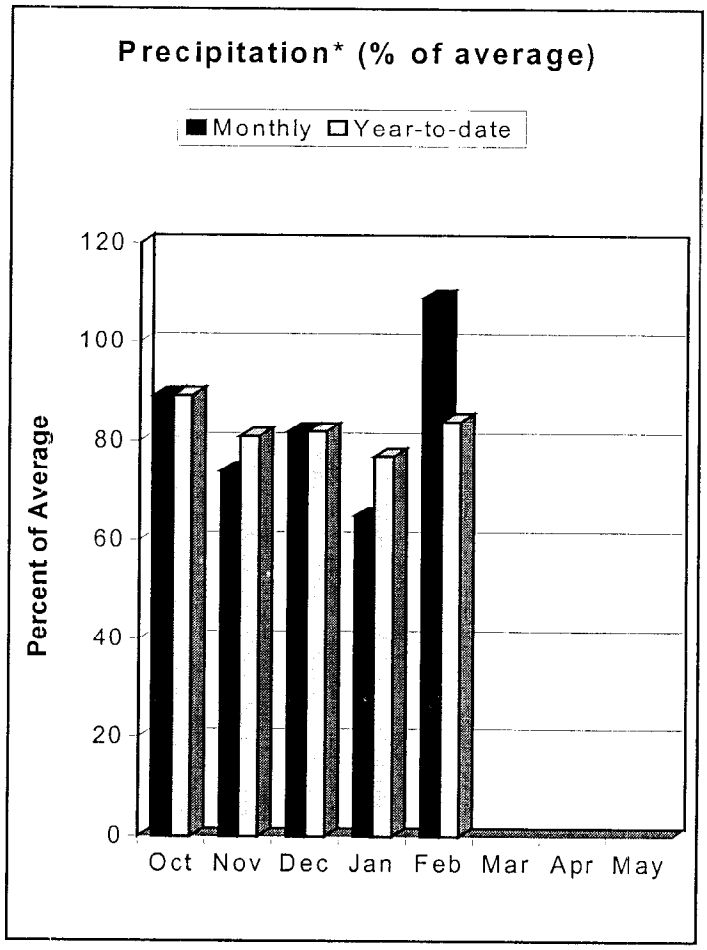
Reservoir storage continues to track at slightly above average volumes across Colorado. The March 1 storage inched up from last month's 105% of average, and is now 107% of average. In terms of volume, the March 1 statewide storage exceeds the average by 207,000 acre feet. Below average storage is reported in the South Platte (88% of average), the Yampa and White (98% of average), and the San Juan, Animas, Dolores, and San Miguel basins (77% of average). Elsewhere across the state, storage volumes are above average. The highest volumes, as a percent of average, continue to be reported in the Arkansas Basin, at 150% of average. As compared to last year's storage, the March 1 volumes remain well below last year's across most of the state. Only the Yampa and White basins are reporting volumes near last year's, and the remainder of the state's major basins are storing 60% to 90% of last year's. The current statewide storage is only 75% of last year's.

Streamflow

With minor snowpack changes during February, streamflow forecasts followed suit and vary only slightly from last month's. Runoff forecasts continue to be below to well below average across most of the state. Those basins with some of the lowest forecasts for this year include the South Platte and the Gunnison. Volumes of only 50% to 70% of average are forecast on some of the streams in these basins. Conditions improve, somewhat, in the Colorado, Yampa, White, North Platte and Arkansas basins, where volumes of 70% to 80% of average are more common. The state's best forecasts occur in the Rio Grande and San Juan, Animas, Dolores, and San Miguel basins. Near average to above average summer volumes are forecasts along most of the streams in these basins. With only average to below average reservoir storage in these basins, water users will rely heavily upon this year's snowmelt runoff for their water supplies in 2001.

GUNNISON RIVER BASIN
as of March 1, 2001





*Based on selected stations

February snowfalls in the Gunnison Basin nudged the snowpack accumulation up to 84% of average on March 1, which is 6% of average higher than last month. No single storm event can be attributed to the additional snowfall, rather there was a continuous parade of relatively modest storms throughout the month that provided a gradual increase. The snowpack percentages now range from 71% of average in the Surface Creek Watershed, to 87% of average in the Uncompahgre Watershed. There is 11% more snow now than last year at this same time. High elevation precipitation was 9% above average during February. The water year total is now 84% of average. The combined storage for 8 major reservoirs in the basin is about 16% above average for this time of year. There is 11% less storage than last year on March 1. While most of the streamflow forecasts are a little better than last month, many of them are significantly below average. Forecasts range from only 61% of average on Surface Creek near Cedaredge, to 116% of average on Cochetopa Creek below Rock Creek.

GUNNISON RIVER BASIN
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Taylor River blw Taylor Park Resv	APR-JUL	41	55	69	70	83	103	99
Slate River nr Crested Butte	APR-JUL	47	60	68	76	77	89	89
East River at Almont	APR-JUL	73	108	130	71	152	185	183
Gunnison River nr Gunnison	APR-JUL	150	202	250	67	298	379	375
Tomichi Creek at Sargents	APR-JUL	9.8	18.8	25	76	31	40	33
Cochetopa Creek blw Rock Creek	APR-JUL	11.7	16.7	20	116	23	28	17.3
Tomichi Creek at Gunnison	APR-JUL	25	43	58	75	75	105	77
Lake Fork at Gateview	APR-JUL	89	109	130	106	151	192	123
Blue Mesa Reservoir Inflow	APR-JUL	273	439	550	79	661	825	699
Paonia Reservoir Inflow	MAR-JUN	37	54	68	67	83	109	101
	APR-JUL	29	49	66	64	85	118	104
N.F. Gunnison River nr Somerset	APR-JUL	115	157	190	66	226	285	288
Surface Creek nr Cedaredge	APR-JUL	6.5	8.3	9.8	61	11.5	14.7	16.0
Ridgway Reservoir Inflow	APR-JUL	59	75	87	89	102	128	98
Uncompahgre River at Colona	APR-JUL	67	91	110	87	130	163	126
Gunnison River nr Grand Junction	APR-JUL	443	775	1000	69	1225	1557	1448

GUNNISON RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BLUE MESA	830.0	489.0	561.7	377.4
CRAWFORD	14.3	4.3	7.0	9.1
FRUITGROWERS	4.3	2.7	3.7	3.7
FRUITLAND	9.2	0.0	0.8	1.9
MORROW POINT	121.0	106.8	110.2	108.6
PAONIA	18.0	3.5	7.2	4.3
RIDGWAY	83.2	72.0	69.9	69.1
TAYLOR PARK	106.0	62.8	72.5	63.9

GUNNISON RIVER BASIN
Watershed Snowpack Analysis - March 1, 2001

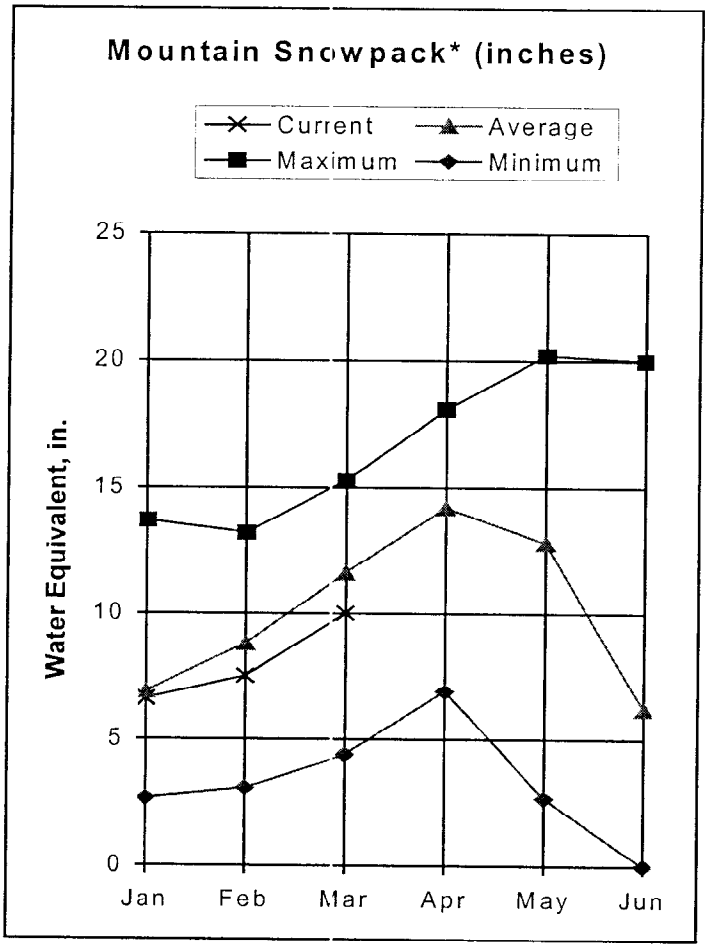
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER GUNNISON BASIN	9	111	80
SURFACE CREEK BASIN	1	90	68
UNCOMPAHGRE BASIN	2	107	89
TOTAL GUNNISON RIVER BASI	11	110	81

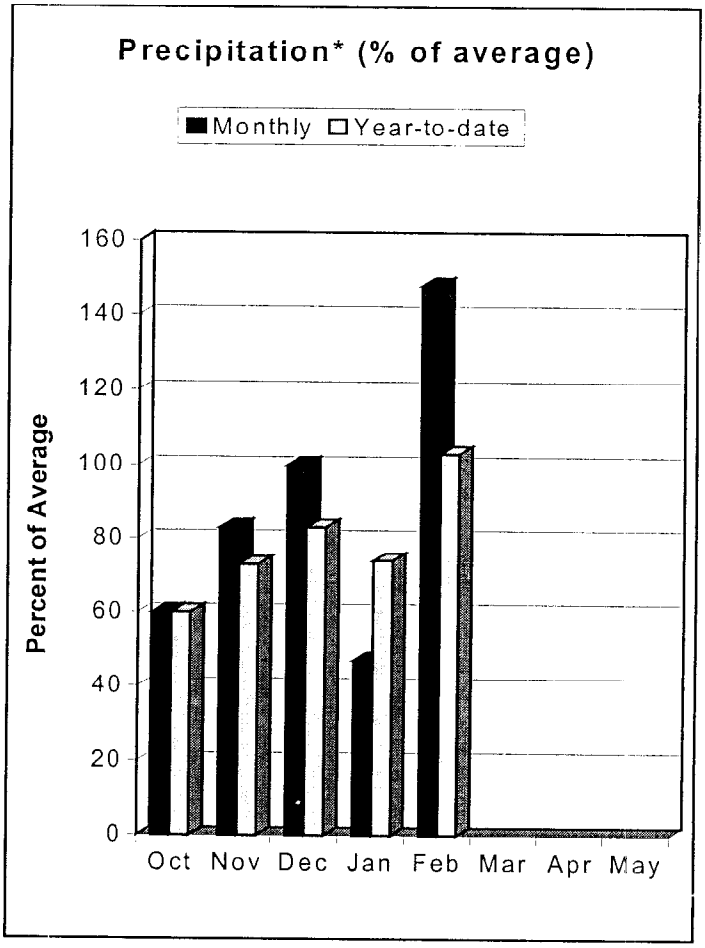
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

UPPER COLORADO RIVER BASIN
as of March 1, 2001





*Based on selected stations

The snowpack in the Colorado Basin is at 85% of average on March 1, which is nearly the same as last month. Although there were no large storms that contributed to the snowpack during February, numerous small storms throughout the month gradually provided a respectable amount to most of the basin. The snowpack remains lowest in the Grand Mesa area, with only 71% of average accumulation in the Plateau Creek Watershed, while further upstream the Willow Creek Watershed has 98% of average snowpack. Precipitation in the higher elevations of the basin was 95% of average during the month of January, and the water year total is now 78% of average on March 1, which is 10% less than last year on the same date. The combined storage from 8 major reservoirs in the basin is about 9% above average on March 1, but this is only 83% of the storage amount last year at this time. The streamflow forecasts for the upcoming runoff season are very similar to last month's forecasts. All of the forecasts are still below average and range from only 75% of average on the Roaring Fork at Glenwood Springs, to 93% of average at the Inflow to Williams Fork Reservoir.

UPPER COLORADO RIVER BASIN
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Lake Granby Inflow	APR-JUL	136	163	185	86	210	252	214
Willow Creek Reservoir Inflow	APR-JUL	28	36	43	86	50	62	50
Williams Fork Reservoir inflow	APR-JUL	62	73	82	93	91	105	88
E.F. Troublesome Creek nr Troublesom	APR-JUL	8.9	12.9	15.7	85	18.5	23	18.5
Dillon Reservoir Inflow	APR-JUL	76	108	130	86	152	184	151
Green Mountain Reservoir inflow	APR-JUL	180	209	230	88	252	286	262
Muddy Creek blw Wolford Mtn. Resv.	APR-JUL	27	39	50	78	64	92	64
Eagle River blw Gypsum	APR-JUL	166	209	245	79	287	361	310
Colorado River nr Dotsero	APR-JUL	633	941	1150	84	1359	1667	1362
Ruedi Reservoir Inflow	APR-JUL	72	90	105	77	122	153	136
Roaring Fork at Glenwood Springs	APR-JUL	334	429	500	75	577	700	671
Colorado River nr Cameo	APR-JUL	968	1463	1800	79	2137	2632	2287

UPPER COLORADO RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DILLON	250.8	218.4	224.4	204.4
LAKE GRANBY	465.6	285.1	377.6	247.4
GREEN MOUNTAIN	139.0	44.4	72.3	67.9
HOMESTAKE	43.0	42.1	42.3	21.9
RUEDI	102.0	69.4	69.3	67.7
VEGA	32.0	9.6	17.0	11.5
WILLIAMS FORK	96.8	57.5	73.3	44.2
WILLOW CREEK	9.0	7.2	6.1	6.5

UPPER COLORADO RIVER BASIN
Watershed Snowpack Analysis - March 1, 2001

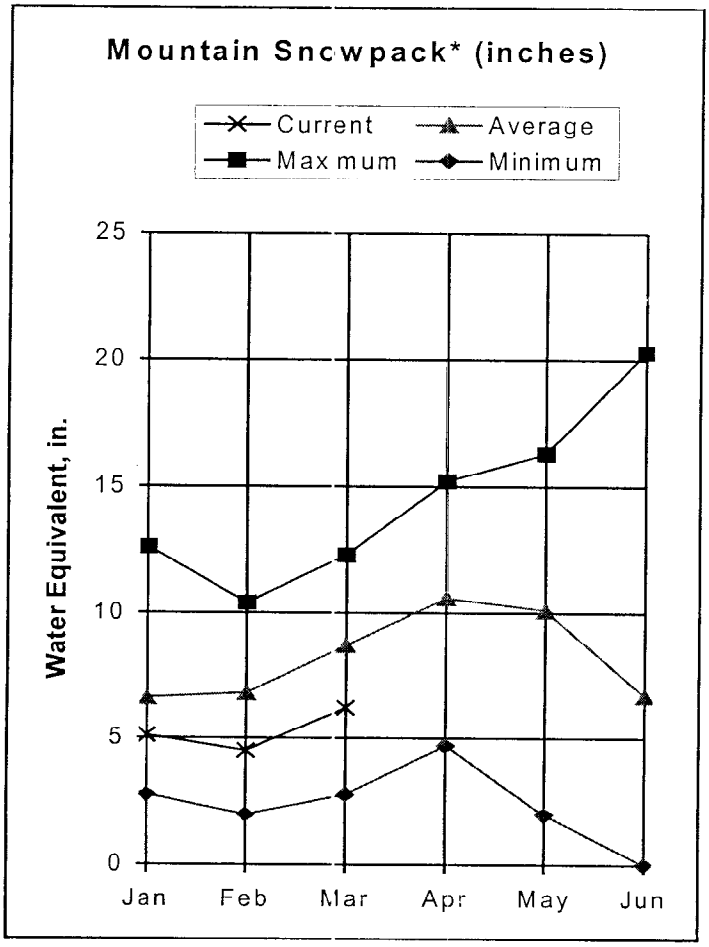
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
BLUE RIVER BASIN	8	86	85
UPPER COLORADO RIVER BASI	29	93	89
MUDDY CREEK BASIN	3	75	84
PLATEAU CREEK BASIN	1	90	68
ROARING FORK BASIN	7	94	75
WILLIAMS FORK BASIN	4	103	93
WILLOW CREEK BASIN	2	82	98
TOTAL COLORADO RIVER BASI	37	93	85

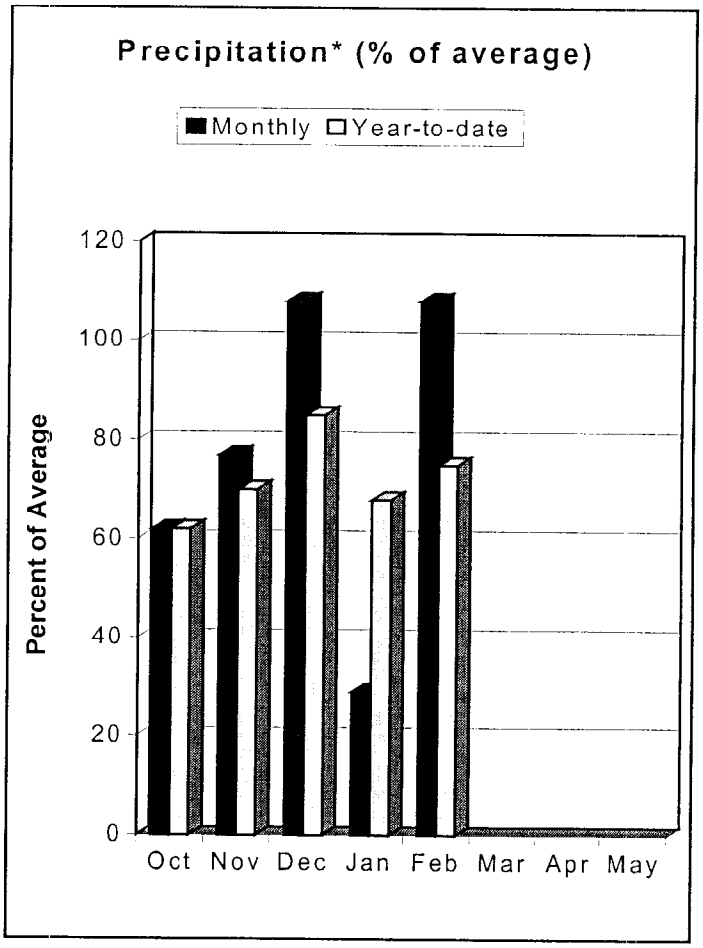
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

SOUTH PLATTE RIVER BASIN
as of March 1, 2001





*Based on selected stations

Although there were no large snow producing storms that occurred in the South Platte Basin during February, a continual stream of small storms throughout the month have provided the basin enough additional snow accumulation to improve the snowpack to 69% of average on March 1, which is 4% of average higher than last month. The snowpack amounts range from only 52% of average in the St. Vrain Watershed, to 81% of average in the Clear Creek Watershed. There is only 75% of the amount of snow in the basin there was last year at the same time. The basin's mountain precipitation during February was a welcome 8% above average during February, and the water year total is 75% of average. The combined reservoir storage for 32 major reservoirs in the basin is 100% of average, which is 2% above the amount of storage last year at this time. Streamflow forecasts have not changed significantly for most of the forecast points, and all remain well below average. Forecasts range from only 52% of average on Bear Creek at Morrison, to 78% of average on Clear Creek at Golden.

SOUTH PLATTE RIVER BASIN
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Antero Reservoir inflow	APR-JUL	3.5	5.1	6.5	56	8.3	12.0	11.7
Spinney Mountain Reservoir inflow	APR-JUL	14.0	18.8	23	61	28	38	38
Elevenmile Canyon Reservoir inflow	APR-JUL	7.9	16.3	22	58	28	36	38
Cheesman Lake inflow	APR-JUL	39	49	57	68	66	83	84
South Platte River at South Platte	APR-SEP	70	117	150	70	183	230	213
Bear Creek at Morrison	APR-SEP	10.8	13.8	15.5	52	20	27	30
Clear Creek at Golden	APR-SEP	58	83	100	78	117	142	128
St. Vrain Creek at Lyons	APR-SEP	30	44	54	69	64	79	78
Boulder Creek nr Orodell	APR-SEP	21	30	36	69	42	51	52
South Boulder Creek nr Eldorado Spri	APR-SEP	10.8	23	32	71	41	53	45
Big Thompson River at mouth nr Drake	APR-SEP	51	68	79	69	90	107	114
Cache La Poudre at Canyon Mouth	APR-SEP	102	165	212	75	267	348	284

SOUTH PLATTE RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ANTERO	20.0	20.0	20.0	15.0
BARR LAKE	32.0	26.7	27.3	24.2
BLACK HOLLOW	8.0	2.5	3.0	4.0
BOYD LAKE	49.0	22.3	42.7	33.8
CACHE LA POUDRE	10.0	6.8	8.0	7.6
CARTER	108.9	101.6	90.6	90.8
CHAMBERS LAKE	9.0	3.1	5.5	3.2
CHEESMAN	79.0	48.1	62.2	55.5
COBB LAKE	34.0	8.9	17.5	13.9
ELEVEN MILE	97.8	99.5	99.0	91.0
EMPIRE	38.0	24.9	32.5	26.3
FOSSIL CREEK	12.0	9.1	5.0	7.2
GROSS	41.8	20.1	36.9	25.7
HALLIGAN	6.4	6.0	6.4	4.5
HORSECREEK	16.0	13.2	13.0	13.2
HORSETOOTH	149.7	25.9	115.2	100.7
JACKSON	35.0	22.2	21.3	30.5
JULESBURG	28.0	14.5	14.9	20.1
LAKE LOVELAND	14.0	9.2	10.8	8.8
LONE TREE	9.0	8.8	8.1	6.2
MARIANO	6.0	4.1	4.5	4.6
MARSHALL	10.0	6.0	8.2	4.5
MARSTON	13.0	4.0	6.7	6.9
MILTON	24.0	18.6	19.6	14.8
POINT OF ROCKS	70.0	55.5	66.6	62.5
PREWITT	33.0	22.5	16.2	19.5
RIVERSIDE	63.1	50.4	51.5	47.6
SPINNEY MOUNTAIN	48.7	18.4	37.0	33.3
STANDLEY	42.0	32.1	40.0	26.6
TERRY LAKE	8.0	5.3	5.5	5.2
UNION	13.0	10.3	11.9	10.6
WINDSOR	19.0	9.5	12.5	11.0

SOUTH PLATTE RIVER BASIN
Watershed Snowpack Analysis - March 1, 2001

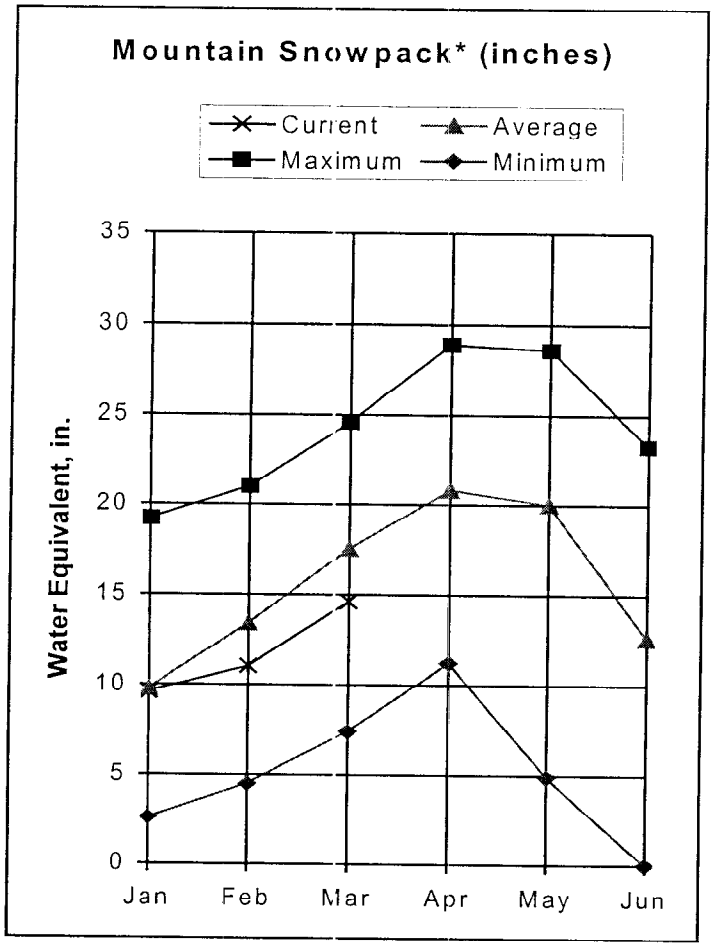
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
BIG THOMPSON BASIN	6	77	69
BOULDER CREEK BASIN	5	67	66
CACHE LA POUDRE BASIN	8	77	72
CLEAR CREEK BASIN	4	87	81
SAINT VRAIN BASIN	3	51	52
UPPER SOUTH PLATTE BASIN	16	89	70
TOTAL SOUTH PLATTE BASIN	40	76	69

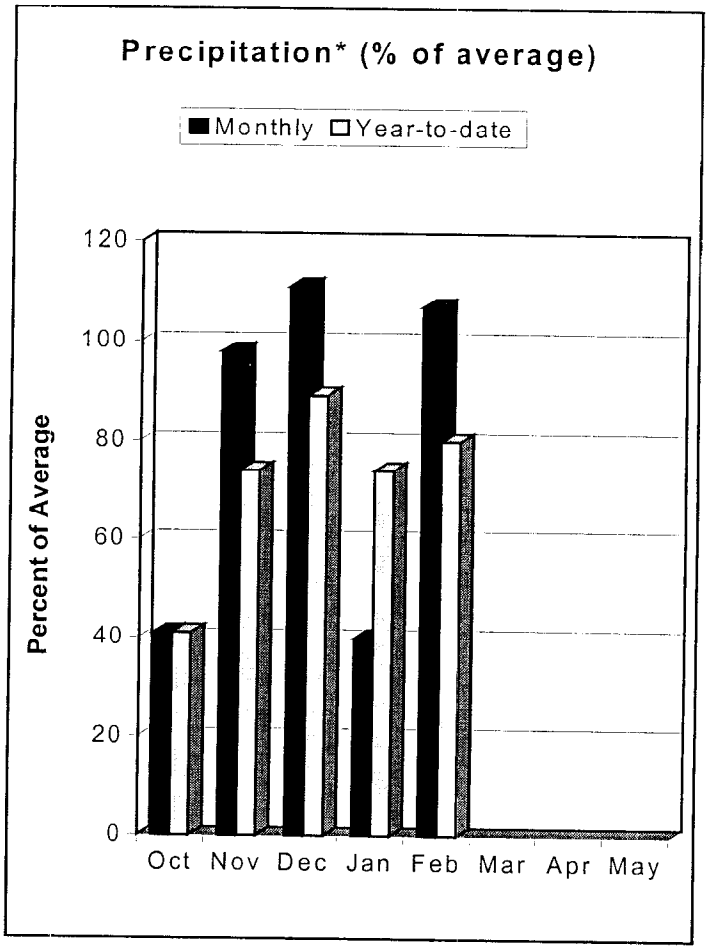
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

YAMPA, WHITE, NORTH PLATTE AND LARAMIE RIVER BASINS as of March 1, 2001





*Based on selected stations

These basins received enough snow during February to hold the snowpack percentage nearly the same as last month. The North Platte Basin's snow accumulation is now 79% of average, while the Yampa and White Basin's accumulation is 82% of average. These snowpack percentages are reflective of the relatively uniform snowpack conditions throughout these basins. There is nearly 20% less snow accumulation in these basins this year than there was last year at this time. There was 7% above average precipitation in the higher elevations of these basins during February, and the water year total is now 80% of average. The combined reservoir storage in these basins is at 98% of average, which is about 10% less than last year at this time. Like the snowpack percentages, the streamflow forecasts remain very nearly the same as last month. Most of the forecasts remain between 70% and 80% of average, with the exceptions being Fortification Creek near Fortification at only 69% of average, and the Yampa River at Steamboat Springs at 82% of average.

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
North Platte River nr Northgate	APR-SEP	74	143	190	70	237	306	271
Laramie River nr Woods	APR-SEP	50	78	97	72	124	163	135
Yampa R abv Stagecoach Res	APR-JUL	15.4	22	26	77	30	37	34
Yampa River at Steamboat Springs	APR-JUL	141	191	225	82	259	309	273
Elk River nr Milner	APR-JUL	144	193	231	77	272	338	300
Elkhead Creek nr Elkhead	APR-JUL	14.1	21	28	72	37	55	39
ELKHEAD CREEK blw Maynard Gulch	APR-JUL	17.3	34	46	78	58	75	59
Fortification Ck nr Fortification	MAR-JUN	2.72	4.59	5.90	69	7.76	10.50	8.50
Yampa River nr Maybell	APR-JUL	420	611	740	78	869	1060	947
Little Snake River nr Slater	APR-JUL	71	97	117	76	139	174	155
LITTLE SNAKE R nr Dixon	APR-JUL	128	195	240	73	285	352	329
LITTLE SNAKE R nr Lily	APR-JUL	139	208	255	71	302	371	358
White River nr Meeker	APR-JUL	150	188	220	79	257	323	279

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
STAGECOACH	33.3	28.2	26.0	25.8
YAMCOLO	9.1	3.0	8.8	6.1

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Watershed Snowpack Analysis - March 1, 2001

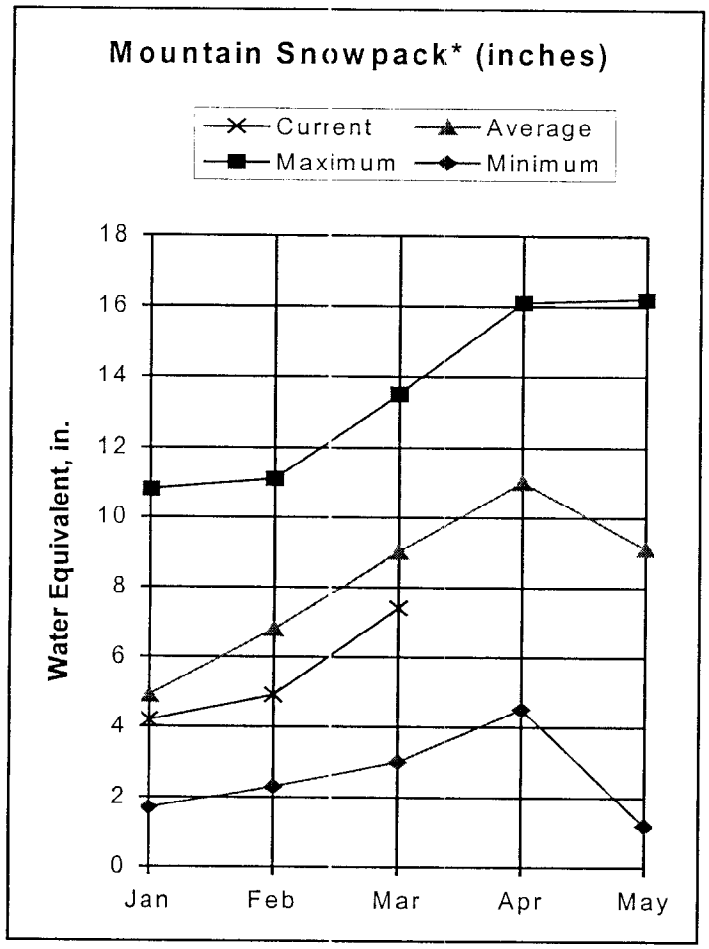
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
LARAMIE RIVER BASIN	3	67	62
NORTH PLATTE RIVER BASIN	5	79	84
TOTAL NORTH PLATTE BASIN	7	78	79
ELK RIVER BASIN	2	84	81
YAMPA RIVER BASIN	11	79	83
WHITE RIVER BASIN	4	94	83
TOTAL YAMPA AND WHITE RIV	14	83	82
LITTLE SNAKE RIVER BASIN	8	88	80

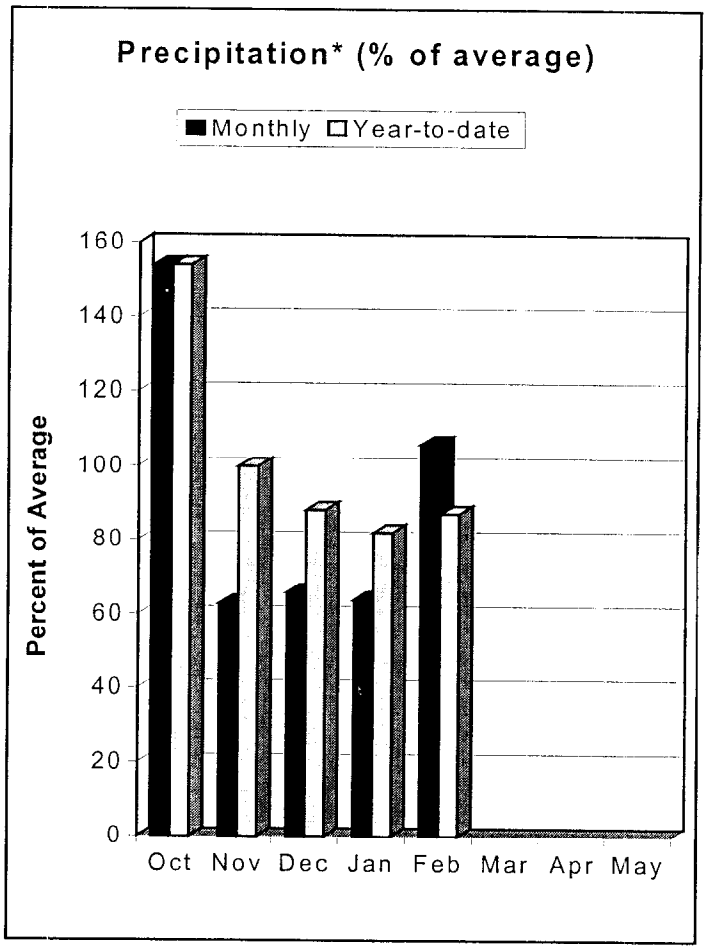
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

ARKANSAS RIVER BASIN
as of March 1, 2001





*Based on selected stations

February snowfall in the Arkansas Basin was enough to boost the snowpack percent of average up from 72% of average on February 1, to 79% of average on March 1. Several large storms that concentrated in the southwest and south central part of Colorado helped provide some much needed snowfall to locations that needed it most in this basin. The Cucharas and Huerfano watersheds have been boosted from only 60% of average last month, to 72% of average on March 1. There is 18% more snow than last year at this time. Precipitation in the high country was 6% above average during February, and the water year total is now only 87% of average. Reservoirs have a combined storage among 12 major reservoirs of 150% of average for this time of year, but this is only 59% of last year's storage level. Streamflow forecasts have improved very slightly from last month's forecasts, but they still remain below average. Forecasts range from 69% of average at Chalk Creek near Nathrop, to 94% of average on the Huerfano River near Redwing.

ARKANSAS RIVER BASIN
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Chalk Creek nr Nathrop	APR-SEP	8.7	15.7	20	69	27	36	29
Arkansas River at Salida	APR-SEP	130	206	257	87	308	384	297
Grape Creek nr Westcliffe	APR-SEP	7.9	9.7	15.2	76	24	36	20
Pueblo Reservoir Inflow	APR-SEP	150	207	282	72	357	467	394
Huerfano River nr Redwing	APR-SEP	7.5	10.1	14.1	94	18.1	24	15.0
Cucharas River nr La Veta	APR-SEP	5.8	9.4	12.2	94	16.9	24	13.0
Trinidad Lake Inflow	APR-SEP	17.6	25	40	93	55	78	43

ARKANSAS RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ADOBE	70.0	58.1	70.3	18.1
CLEAR CREEK	11.0	5.6	5.4	7.1
GREAT PLAINS	150.0	66.8	154.8	38.8
HOLBROOK	7.0	5.5	6.2	4.7
HORSE CREEK	28.0	0.0	25.7	9.8
JOHN MARTIN	335.7	161.2	347.8	90.8
LAKE HENRY	8.0	6.2	6.3	5.2
MEREDITH	42.0	26.1	39.2	13.2
PUEBLO	236.7	217.4	272.8	144.3
TRINIDAD	72.3	32.4	68.5	28.3
TURQUOISE	126.6	55.0	107.9	52.3
TWIN LAKES	86.0	40.7	44.0	36.8

ARKANSAS RIVER BASIN
Watershed Snowpack Analysis - March 1, 2001

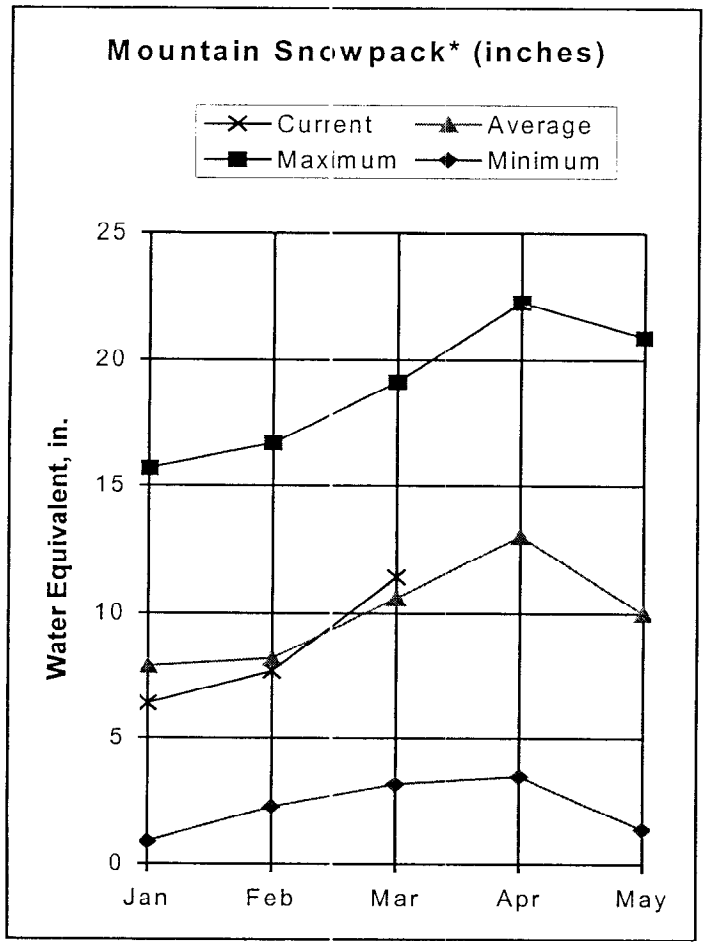
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER ARKANSAS BASIN	3	103	84
CUCHARAS & HUERFANO RIVER	4	128	72
PURGATOIRE RIVER BASIN	2	122	81
TOTAL ARKANSAS RIVER BASI	8	118	79

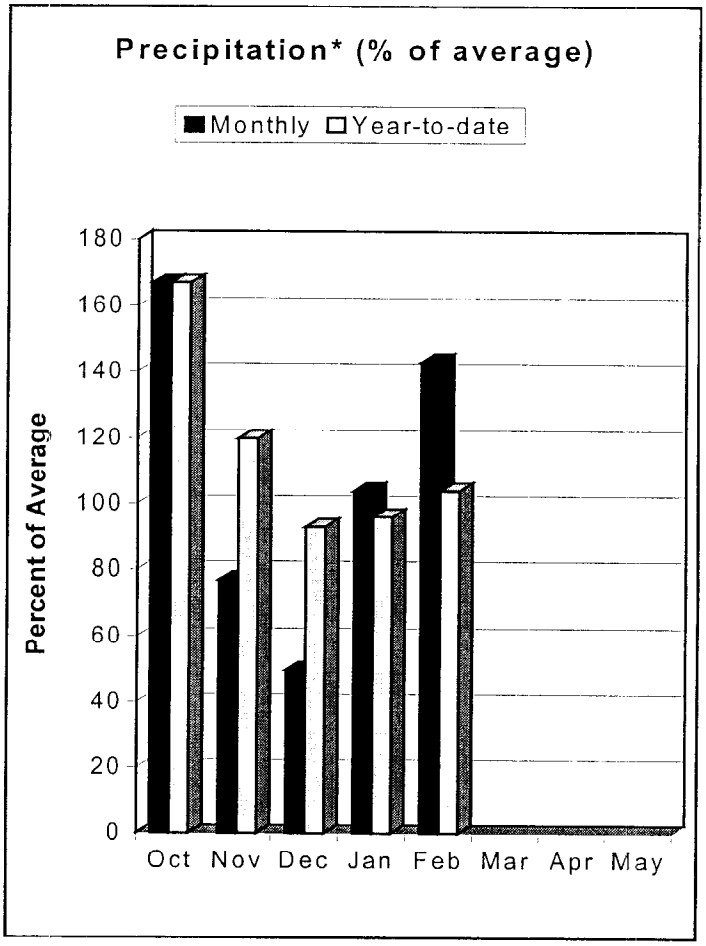
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

UPPER RIO GRANDE RIVER BASIN
as of March 1, 2001





*Based on selected stations

The Rio Grande Basin continued to receive some of the largest amounts of snowfall in the state during February. Snowpack percentages are up significantly for the second month in a row with accumulations at 103% of average, which is the highest percentage in the state. Snowpack percentages range from 86% of average in the Alamosa Creek Watershed, to 112% of average in the Upper Rio Grande Watershed. There is 230% of the amount of snow there was last year at this time. High elevation precipitation was a very welcome 43% above average during February. The water year total is now 104% of average. Reservoir storage is about 7% above average for this time of year, but is only 67% of the storage amount last year at this time. With the improved snowpack conditions, the upcoming runoff season's streamflow forecasts are some of the most promising in the state. All of the forecasts are near to above average. Forecasts range from 87% of average on San Antonio River at Ortiz, to 123% of average on Costilla Creek near Costilla.

UPPER RIO GRANDE BASIN
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Rio Grande at Thirty Mile Bridge	APR-SEP	104	129	150	113	174	217	133
Rio Grande Reservoir Inflow	APR-JUL	93	115	133	113	153	189	118
Rio Grande at Wagon Wheel Gap	APR-SEP	245	323	375	114	427	505	330
South Fork Rio Grande at South Fork	APR-SEP	101	127	145	110	163	189	132
Rio Grande nr Del Norte	APR-SEP	372	505	595	114	685	818	520
Saguache Creek nr Saguache	APR-SEP	20	30	37	109	44	54	34
Alamosa Creek abv Terrace Reservoir	APR-SEP	44	59	69	100	79	94	69
La Jara Creek nr Capulin	MAR-JUL	3.02	6.28	8.50	99	10.72	13.98	8.60
Trinchera Water Supply	APR-SEP	17.1	22	33	110	44	59	30
Platoro Reservoir Inflow	APR-JUL	40	51	58	98	65	76	59
	APR-SEP	45	56	64	99	72	84	65
Conejos River nr Mogote	APR-SEP	128	171	200	100	229	272	201
San Antonio River at Ortiz	APR-SEP	6.0	10.3	13.9	87	18.0	25	16.0
Los Pinos River nr Ortiz	APR-SEP	39	57	70	97	83	101	72
Culebra Creek at San Luis	APR-SEP	8.7	19.0	26	130	33	43	20
Costilla Reservoir inflow	MAR-JUL	6.50	9.18	11.00	121	12.82	15.50	9.10
Costilla Creek nr Costilla	MAR-JUL	16.1	23	27	123	31	38	22

UPPER RIO GRANDE BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CONTINENTAL	15.0	5.4	4.4	5.3
PLATORO	53.7	14.0	29.3	16.3
RIO GRANDE	51.0	13.8	3.0	16.5
SANCHEZ	103.0	26.0	45.8	16.9
SANTA MARIA	45.0	10.0	20.1	8.9
TERRACE	13.1	5.4	8.8	5.9

UPPER RIO GRANDE BASIN
Watershed Snowpack Analysis - March 1, 2001

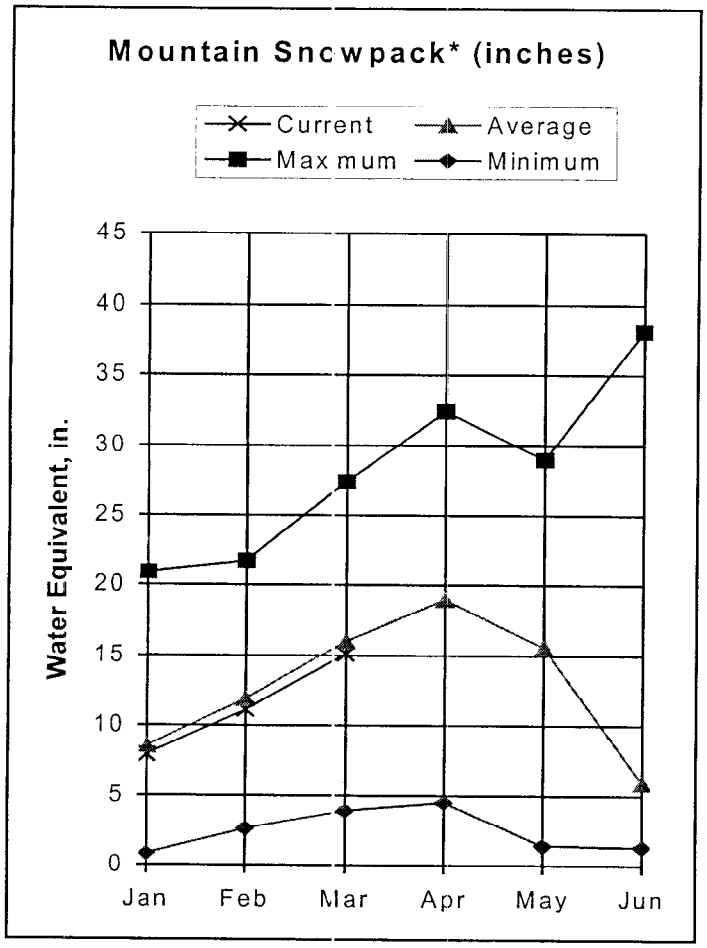
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
ALAMOSA CREEK BASIN	2	311	86
CONEJOS & RIO SAN ANTONIO	5	217	93
CULEBRA & TRINCHERA CREEK	5	129	109
UPPER RIO GRANDE BASIN	10	312	111
TOTAL UPPER RIO GRANDE BA	23	238	103

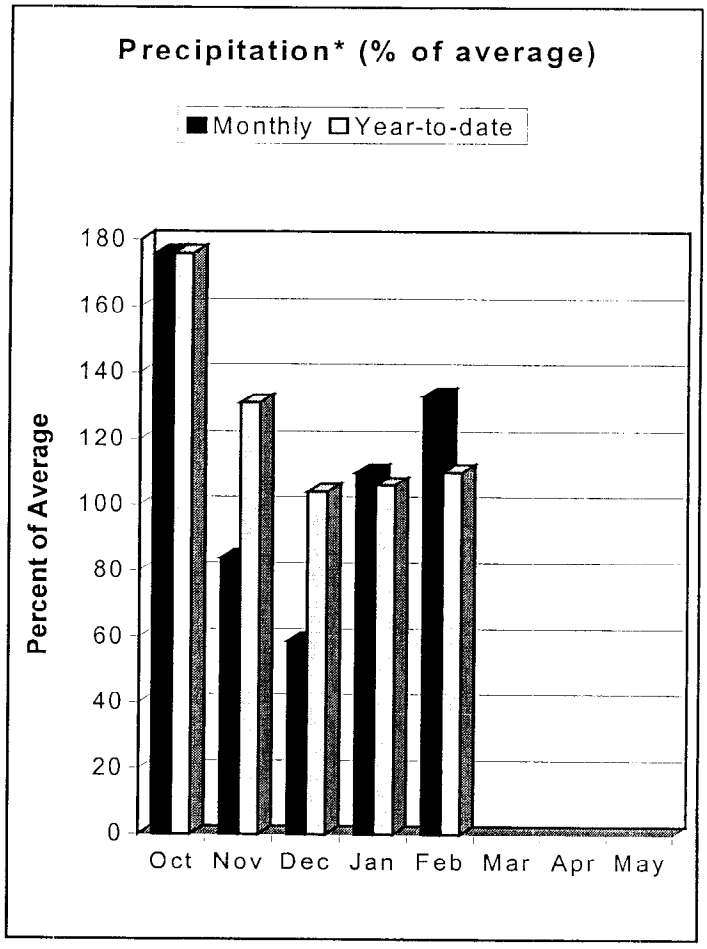
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS as of March 1, 2001





*Based on selected stations

On average, February is the snowiest month in these basins, and this February was no exception as these basins received some of the largest amounts of snow during February than any other place in the state. Almost a continual delivery of snowfall throughout the month, including several large storms, has boost the snowpack percentage from 91% of average on February 1, to 96% of average on March 1. There is 151% of the amount of snow in the basins that there was last year at this time. Precipitation during February was a much welcome 33% above average, and the water year total is 10% above average on March 1. The combined reservoir storage level for 6 major reservoirs in these basins is only 77% of average for this time of year, which is nearly the same as last month. There is only 66% of the storage there was last year at this time. Streamflow forecasts remain very similar to last month's forecasts, and are highly variable depending on snowpack and precipitation conditions. They range from only 86% of average flow at the Inlet to Lilylands Reservoir, to 120% of average flow at the Inflow to Vallecito Reservoir.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Streamflow Forecasts - March 1, 2001

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Dolores River at Dolores	APR-JUL	150	202	240	98	278	330	246
McPhee Reservoir inflow	APR-JUL	170	235	280	99	325	390	283
San Miguel River nr Placerville	APR-JUL	70	90	110	90	130	160	122
Gurley Reservoir Inlet	APR-JUL	8.9	12.7	15.2	92	17.7	22	16.5
	APRIL			1.40	84			1.66
	MAY			8.50	96			8.83
	JUNE			4.50	96			4.67
	JULY			0.80	61			1.32
Cone Reservoir Inlet	APR-JUL	1.73	2.31	3.20	91	4.09	5.41	3.53
	APRIL			0.32	70			0.46
	MAY			1.71	104			1.64
	JUNE			0.85	82			1.04
	JULY			0.32	84			0.38
Lilylands Reservoir Inlet	APR-JUL	1.38	2.02	2.46	86	2.90	3.54	2.86
	APRIL			0.20	50			0.40
	MAY			1.44	109			1.32
	JUNE			0.62	71			0.87
	JULY			0.20	74			0.27
Rio Blanco at Blanco Diversion	APR-JUL	31	45	55	102	65	79	54
Navajo River at Oso Diversion	APR-JUL	35	53	65	100	77	95	65
San Juan River nr Carracus	APR-JUL	230	331	410	107	497	641	382
Piedra River nr Arboles	APR-JUL	162	215	250	114	285	338	219
Vallecito Reservoir Inflow	APR-JUL	167	207	235	120	263	303	196
Navajo Reservoir Inflow	APR-JUL	543	738	870	113	1003	1198	772
Animas River at Durango	APR-JUL	273	361	420	101	479	567	418
Lemon Reservoir Inflow	APR-JUL	41	56	65	114	75	89	57
La Plata River at Hesperus	APR-JUL	14.5	21	25	104	29	36	24
Mancos River nr Mancos	APR-JUL	22	36	45	113	54	68	40
	APRIL			8.50	147			5.80
	MAY			19.0	120			15.9
	JUNE			14.0	102			13.7
	JULY			3.50	76			4.60

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GROUNDHOG	21.7	11.3	16.3	10.5
JACKSON GULCH	10.0	2.8	7.0	4.5
LEMON	40.0	10.1	30.2	19.7
MCPHEE	381.2	220.0	323.4	302.0
NARRAGUINNEP	19.0	17.2	18.6	12.5
VALLECITO	126.0	48.2	72.7	54.8

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Watershed Snowpack Analysis - March 1, 2001

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
ANIMAS RIVER BASIN	7	173	97
DOLORES RIVER BASIN	3	118	89
SAN MIGUEL RIVER BASIN	4	104	85
SAN JUAN RIVER BASIN	2	263	106
TOTAL SAN MIGUEL, DOLORES AN JUAN RIVER BASINS	15	157	95

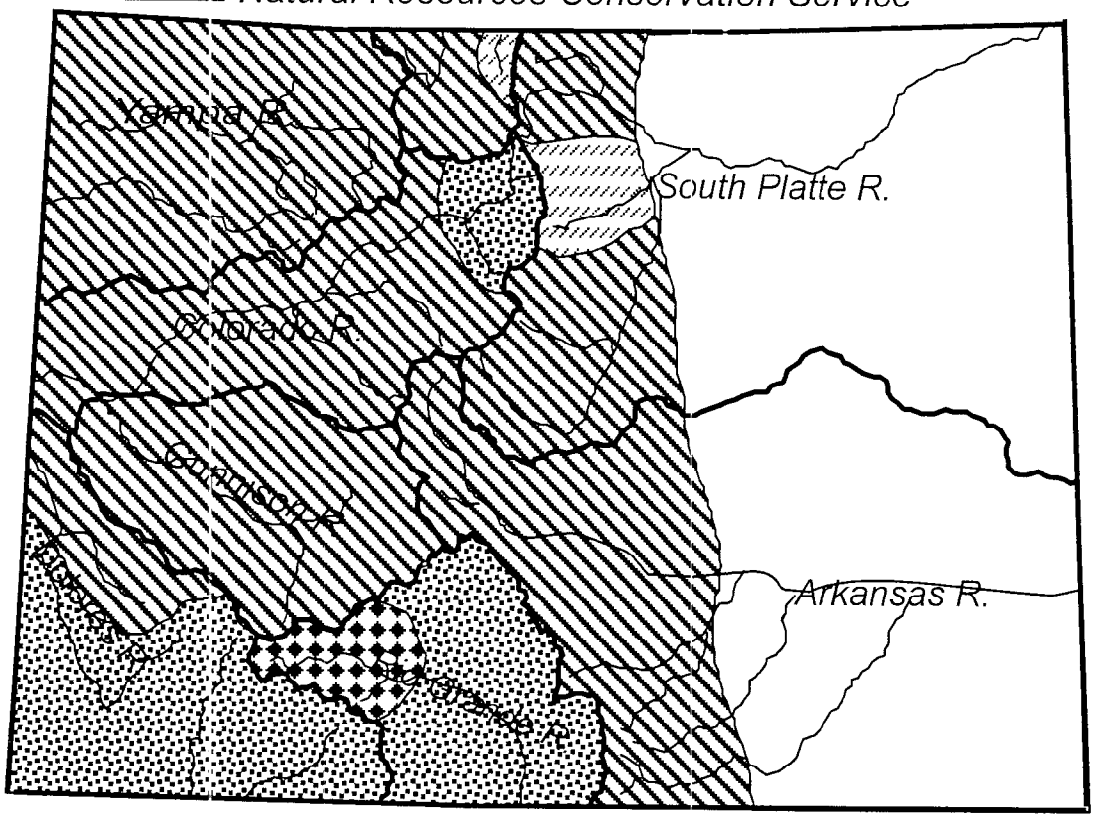
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table. The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

USDA

Natural Resources Conservation Service



Snowpack
March 1, 2001

Statewide: 86% of Average
108% of Last Year

- ***Much Above Average > 130%***
- ***Above Average 110% to 130%***
- ***Near Average 90% to 110%***
- ***Below Average 70% to 90%***
- ***Much Below Average < 70%***
- ***Not Measured***

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In addition to the basin outlook reports, water supply forecast information for the Western United States is available from the Natural Resources Conservation Service and the National Weather Service monthly, January through May. The information may be obtained from the National Resources Conservation Service web page at http://www.wcc.nrcs.usda.gov/water/quantity/westwide.html.

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Colorado
Basin Outlook Report

Natural Resources Conservation Service
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